

## **Weather And Climate**

### **Exercises**

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#### **Long answer questions:**

1. Why is there a variation in the distribution of pressure in the atmosphere?
  
2. Describe the damages that a tropical cyclone can bring to coastal areas.

## Solutions

### Long-answer questions:

1. Air has weight and exerts pressure on the earth's surface. This is known as air pressure or atmospheric pressure. The density and pressure in the air decreases with altitude. Therefore, the pressure near the earth's surface is greater than that in the upper regions of hills and mountains. Temperature and air pressure have inverse relationship. When temperature is high, pressure is low and when temperature is low, pressure is high. Areas with low temperature have cold air. Cold air is heavy and it sinks while warm air is light and it rises. This causes air to move. There are four pressure belts on the earth. Equatorial low pressure and polar high pressure belts are thermal; while subtropical high pressure and temperate low pressure belts are formed due to dynamic reasons.
2. Cyclones-nature fury cause is colossal damage to the areas they hit. The wind speeds can be up to 250 km per hour and can last for hours, accompanied by heavy rains the tidal surge can be 7 to 10 metres high which can be swept to about 20 km inland. People lose their lives, farmland comes under water, livestock perishes and property and industrial areas are damaged. Power and telecom lines snap/ drinking water is contaminated causing severe shortage of food and clean drinking water. Due to salination, due to tidal surges, large tracts of agricultural land are rendered infertile. Forests, plantations, mangrove forests are destroyed or they just vanish.